

WHAT IS CLAIMED IS:

1. A magnetic recording disk drive comprising:

a rotatable magnetic recording disk;

a head assembly having:

5 at least one write element for writing data to the disk, the write
element being encapsulated by a first protrusion pad that wears away when
in contact with the rotating disk; and

10 at least one read element for reading data from the disk, the read
element being encapsulated by a second protrusion pad that wears away
when in contact with the rotating disk;

a slider supporting the pads and having a gas-bearing surface for
maintaining the slider near the surface of the disk when the disk is rotating,
wherein the protrusion pads extend beyond the gas-bearing surface of the slider
until burnished away;

15 an actuator connected to the slider for moving the slider across the surface
of the disk; and

a housing surrounding the disk and slider.

2. The disk drive of Claim 1, wherein the housing is hermetically sealed to provide a gaseous environment that is non-corrosive to the elements after the protective pad has been worn away.

3. The disk drive of Claim 1, wherein the housing contains vapor phase corrosion inhibitors (VPCI) to alleviate the risk of corrosion to the elements.

4. The disk drive of Claim 1, wherein a y-dimension is established vis-à-vis disk motion under the arm, and the pads are spaced from each other in the y-dimension.

5. The disk drive of Claim 1, wherein the pads are separated from each other by at least fifty (50) microns.

6. The disk drive of Claim 1, further comprising a third element on a respective third protrusion pad.

7. The disk drive of Claim 1, wherein the head assembly includes at least one insulating region, at least one pad extending partly in and partly beyond the insulating region.

8. The disk drive of Claim 1, wherein the head assembly includes at least one insulating region, at least one pad being disposed entirely within the insulating region.

9. A head structure for a magnetic disk drive, comprising:

at least one read element;

5 a first protrusion pad closely surrounding the read element, the first protrusion pad being at least burnishable until such time as the first pad has been burnished by cooperation between the first pad and at least one disk rotating beneath the first pad;

at least one write element; and

10 a second protrusion pad closely surrounding the read element, the second protrusion pad being at least burnishable until such time as the second pad has been burnished by cooperation between the second pad and at least one disk rotating beneath the second pad;

wherein the pads are spaced from each other on a slider member.

15 10. The structure of Claim 9, wherein the pads are spaced from each other by at least fifty (50) microns.

11. The structure of Claim 9, wherein the disk drive defines a y-dimension, and the pads are spaced from each other in the y-dimension.

12. The structure of Claim 9, further comprising a third element on a respective third protective pad.

13. The structure of Claim 9, comprising at least one insulating region, at least one pad extending partly in and partly beyond the insulating region.

5 14. The structure of Claim 9, comprising at least one insulating region, at least one pad being disposed entirely within the insulating region.

15. The structure of Claim 9, wherein the structure is disposed in a hermetically sealed housing to provide a gaseous environment that is non-corrosive to the elements.

10 16. The structure of Claim 9, wherein the structure is disposed in a housing containing vapor phase corrosion inhibitors (VPCI) to alleviate the risk of corrosion to the elements.

15 17. The structure of Claim 9, wherein the structure is disposed in a housing containing sufficient amount of desiccant material to sufficiently reduce the partial pressure of the corrosion causing vapors in the disk drive.

18. A disk drive, comprising:

a rotatable magnetic recording disk; and

a head assembly having:

at least one means for writing data to the disk, the means for
writing being covered by a first burnishable means; and

at least one means for reading data from the disk, the means for
reading being covered by a second burnishable means, the first and second
burnishable means being spaced from each other by a distance sufficient
to substantially prevent the second means from being heated when the
means for writing is activated.

19. The disk drive of Claim 18, further comprising:

a slider supporting the burnishable means and having a gas-bearing surface
for maintaining the slider near the surface of the disk when the disk is rotating,
wherein the burnishable means extend beyond the gas-bearing surface of the slider
until burnished away;

an actuator connected to the slider for moving the slider across the surface
of the disk; and

a housing surrounding the disk and slider.

20. The disk drive of Claim 19, wherein the housing is hermetically sealed to provide a gaseous environment that is non-corrosive to the means for writing and means for reading after the burnishable means have been worn away.

5 21. The disk drive of Claim 19, wherein the housing contains vapor phase corrosion inhibitors (VPCI) to alleviate the risk of corrosion to the means for writing and means for reading.

22. The disk drive of Claim 18, wherein the disk defines a y-dimension, and the burnishable means are spaced from each other in the y-dimension.

10 23. The disk drive of Claim 18, wherein the burnishable means are separated from each other by at least fifty (50) microns.

24. The disk drive of Claim 18, further comprising a third means for at least one of: reading, and writing, on a respective third burnishable means.